

**Signal Chassis****Control Chassis**

variables to change on a still to still basis.

With the larger configuration of ESS-3, material from one frame store can be digitally keyed into the other frame store using internal circuits to yield montages of stills. No external switcher or keyer is required.

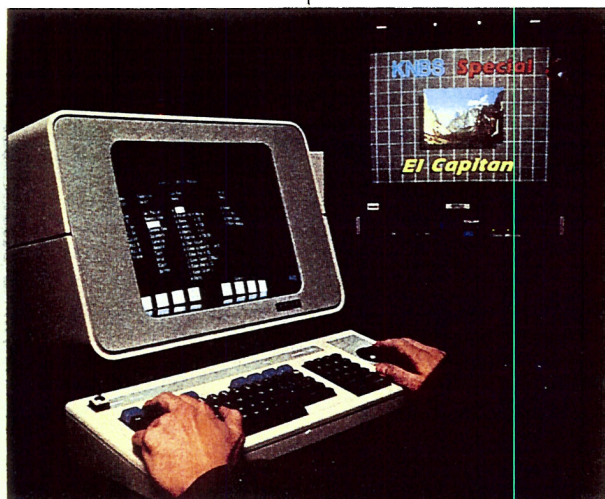
The ESS-3 production system. It's the perfect way to get added production versatility — at a price you can well afford. It's ideal for TV stations or teleproduction houses and all other types of television applications.

### More than a still store system

**T**he ESS-3 is much more than just a still store system. The com-

position access station provides the interactive human interface to the creative capabilities of the system. With the familiar keyboard and eight menu-based soft keys, the transition to electronic graphics composition can be easily accomplished. The video monitor displays the functions which can be selected and prompts the user as to the variable parameters. These are entered as single letter commands or numbers. They can also be dynamically controlled via the use of the "trackball." The numerical values allow repetitive precision manipulations to be performed with ease.

**Graphic Designer creating complex still using the composition access station**



### Composition Access Station

Frequently used colors for backgrounds, graphic elements or titles can be instantly recalled and selected from an on-screen palette. Full independent control of the three color parameters — hue, saturation and luminance — allows any color to be created or matched. This allows custom palettes to be created efficiently. The creation of video montages is best described using familiar graphic arts terms.

### Cut and paste

**A**n image or any portion of an image can be cut from one frame and pasted onto another. The cut can be made with a circle, diamond or rectangle with full independent



control of both horizontal and vertical size. Thus a circle can become an ellipse and a rectangle can become a square. The cut image can be reduced in size if desired and pasted in any position on the second image with a hard or variable width soft edge. There is also a full range of transparency control on the cut image. All this, combined with full control digital blurring, will provide an array of creative tools unequalled among still store systems.

Another mode used in assembling dynamic graphics is the use of either luminance or chrominance keying. The digital keying system allows precise control without typical complex operations functions. The keyer will also operate in a unique "scissors" mode in which the signal from a copy camera is used as the cutting information between two stills. This process allows irregular shapes to be cut out of any still to create unique composition effects.

### Captioning

The capability to use captions or titles as graphic elements on still images is another innovative feature of the ESS-3 composition system. Character fonts are stored in the system as monochrome images with full luminance resolution. Therefore, they retain their optical or printed type quality throughout multiple generations. This method of storing fonts also allows the user to scan in any font using a video camera.

### Remote Access Station with Playback List Displayed

Since the individual characters are stored as pictures, not digital data, no time-consuming "clean up" action is required.

The scanned-in fonts can be recalled from the keyboard, varied in both horizontal and vertical size, colored, bordered, outlined or shadowed and then overlaid over still images to caption the graphic montage.

### Summary

In summary, the ESS-3 provides full creative control from a single easy-to-use control station over tasks normally requiring two or three different types of equipment. The quality of the resulting image will be unequalled since all manipulations have been performed in the digital domain without the decoding and re-encoding required with outside analog equipment.

### More than a still player

The most common use of still images in the broadcast world today is to add interest and variety to news presentations. Since



news is usually presented "live," the preprogramming of the still presentation reduces the effort required to produce the newscast. The second access station available for ESS-3 is the remote access station. This is a compact device with a bright fluorescent display designed primarily to allow an operator to play a pre-assembled list of stills in sequence with a minimum of physical or mental effort. A group of eight dedicated keys provide fast, convenient access for the various list playback functions. The typical system used in this manner has two output channels, with one used for previewing the next still while the other is on the air. The large program and preview keys allow the transitions to be performed with single function ease.

Though the planned list playback is the ideal news presentation, the capability to leave this mode and insert a still of a late-breaking story has also been provided.

### Presentation enhancements

The two accessories that greatly enhance the still presentation also reduce the effort on the operator. Since the presentation attributes of each still can be entered on the list, the

size, cropping, position, border size and color can be varied from still to still with reduced possibility of human error. The second function provided by these accessories allows the still-to-still transitions to be pre-programmed and performed with a single pushbutton function. This also frees a portion of the mix/effects function of the switcher and increases the creative aspect of the news presentation.

The large bright display keeps the operator informed as to what still is present on either channel and also indicates the location within the list and what transition will take place between subsequent stills.

Functional values are added to the remote access station by providing the capability of recording a still frame or a still field. The ESS-3 always stores a frame (2 fields) of information on the disk. When the image is "grabbed" from a scene with action, the field grab mode is used and the system provides the second field through the use of digital interpolation techniques. This method provides the optimum picture quality without any creative limitations.